



Rialtas na hÉireann
Government of Ireland

Progress Report 2024

National Smart Specialisation Strategy for Innovation 2022-2027

Prepared by the Department of Enterprise, Trade and Employment

December 2024

Ireland's Smart Specialisation Strategic Goals and Deliverables

High-Level Strategic Goal 1	Our new S3 for Ireland will link national and regional enterprise and innovation policy, connecting the statutory RSEs, Regional Enterprise Plans, Impact 2030: Ireland's Research and Innovation Strategy and other national policies to bring greater policy coherence at multiple levels of governance.	This will be achieved through: <ul style="list-style-type: none"> • Convening a national S3 national implementation group to bring together regional and national innovation policy makers; • Continuing to focus on identifying linkages and exploiting synergies between relevant national and regional strategies; and • Providing input, informed by smart specialisation insights, into the development of new strategies and policies over the lifecycle of S3.
High-Level Strategic Goal 2	Smart Specialisation will support the adoption of the European Regional Development Fund in Ireland by supporting policy objective 1 'A Smarter Europe'.	This will be achieved through: <ul style="list-style-type: none"> • Approval of Ireland's S3 by the European Commission.
High-Level Strategic Goal 3	Smart Specialisation will improve research and innovation capacity in Ireland's regions.	This will be achieved through: <ul style="list-style-type: none"> • Increasing the intensity of Business R&D that takes place across all regions, with a particular focus on underperforming regions, through delivering new and enhanced agency interventions with a particular focus on strengthening industry-academic collaborations across Ireland.
High-Level Strategic Goal 4	Smart Specialisation will encourage more regionally dispersed RD&I, strengthen the enterprise base and identify emerging areas of opportunity.	This will be achieved through: <ul style="list-style-type: none"> • Leveraging and building on the analysis of Irish regions' strengths and emerging areas of opportunity undertaken as part of the development of Ireland's S3; • Addressing gaps in existing regional innovation infrastructures and systems through new funding, by supporting projects aligned with the nine REPs to 2024; and • Seeking out opportunities to enable inter-regional collaboration through the REP Implementation structures.
High-Level Strategic Goal 5	Smart Specialisation will increase the regional uptake of new advanced technologies to increase the reach of the twin green and digital transformations throughout Irish enterprise.	This will be achieved through: <ul style="list-style-type: none"> • Enhanced supports prioritising knowledge transfer and industry-academic collaboration, informed by our smart specialisation analysis and findings.
High-Level Strategic Goal 6	Smart Specialisation will drive the development of skills needed for enhancing innovation activity across the economy.	This will be achieved through: <ul style="list-style-type: none"> • New and enhanced supports based on creating the necessary skills for needs-led innovation, informed by our S3 analysis and findings.
High-Level Strategic Goal 7	Smart Specialisation will encourage the maximising of sectoral strengths through clustering and the scaling of Ireland's existing areas of research excellence.	This will be achieved through: <ul style="list-style-type: none"> • Supporting the development of a new National Clustering policy framework through the identification of regional and national sectoral strengths, capabilities and opportunities; and • Supporting the scaling of Ireland's existing network of national R&D facilities and clusters by establishing a coherent national framework for S3, and by setting out opportunities that exist within Ireland's regions.
High-Level Strategic Goal 8	Smart Specialisation will lead to a greater visibility and coherence of the innovation system in Ireland's regions both nationally and in Europe.	This will be achieved through: <ul style="list-style-type: none"> • The establishment of S3 monitoring of implementation procedure and governance at local, regional and national level; • The incorporation of S3 goals, approach and priorities into Impact 2030: Ireland's Research and Innovation Strategy; • Ongoing engagement with S3 in Ireland by the European Commission.

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Executive Summary

The National Smart Specialisation Strategy for Innovation 2022 to 2027 has yielded substantial achievements by focusing on regional strengths, fostering innovation and supporting sustainable growth across the regions. Central to these efforts has been the support from the European Regional Development Fund (ERDF) with €396 million earmarked for regional investments. This funding has enabled several projects which align with the strategy's core priorities: digital transformation; green innovation; regional collaboration; and enhancing Ireland's research and innovation infrastructure. This is supported by the National Implementation Group, established in December 2022, which oversees the delivery of the strategy's national and regional priorities. The group ensures all enabling Smart Specialisation criteria are met at the national level while identifying regional interests.

Overall, Ireland's strategy emphasises developing regional hubs and technological universities. This has strengthened Ireland's innovation ecosystem, creating pathways for skilled workers and supporting technology transfer from higher education to industry. This region-focused innovation aligns with the White Paper on Enterprise 2022-2030, as well as the nine Regional Enterprise Plans, ensuring that each area's economic potential is fully realised while reinforcing national competitiveness. These efforts are complemented by ongoing monitoring and performance evaluation, ensuring that funded projects meet growth targets and support the broader strategic vision for Ireland's economic future.

This report is structured in terms of delivery across eight high-level strategic goals. Key highlights delivered include:

- Goal 1: Linking national and regional enterprise and innovation policy:
 - The National Implementation Group for Smart Specialisation has ensured **alignment with strategies** such as Impact 2030: Ireland's Research and Innovation Strategy and the White Paper on Enterprise 2022-2030
- Goal 2: Enabling "A Smarter Europe":
 - Ireland's Smart Specialisation Strategy aligns with the European Commission ERDF Policy Objective 1 "A Smarter Europe". The Commission approved Ireland's Smart Specialisation Strategy in July 2022 which enabled the **launch of Ireland's two ERDF regional programmes**, with €396 million financed by the EU.
- Goal 3: Improving research and innovation capacity in Ireland's regions:
 - **New ERDF schemes have commenced**, such as **TU Research and Innovation Supporting Enterprise (TU RISE) Scheme**, which assists higher education institutions in the technological sector to build and increase research capacity and talent, while enhancing engagement with enterprise regionally; and **Knowledge Transfer (KT) Boost**, which enables HEI Innovation Offices/Technology Transfer Offices across Ireland, to support knowledge and technology transfer to industry, and the creation of spin-out companies.
- Goal 4: Encouraging more regionally dispersed RD&I:
 - The new **€145 million Smart Regions Enterprise Innovation Scheme (SREIS)** will support projects aligned with areas of regional strength and potential as identified in

the Regional Enterprise Plans. Co-funded by the ERDF, the first call for SREIS was launched in October 2023.

- Goal 5: Advancing the twin green and digital transformation:
 - Ireland now has four operational **European Digital Innovation Hubs**, one in each NUTS 2 region alongside a dedicated hub for AI. These provide access to technical expertise and experimentation, as well as innovation services, and the training and skills development necessary for successful digital transformation.
- Goal 6: Skills for innovation:
 - The new Taighde Éireann-Research Ireland **Accelerating Research to Commercialisation (ARC) Hub Programme**, and Enterprise Ireland's **Innovators' Initiative**, are aimed at creating highly skilled innovators, through accelerating the commercialisation of academic research and through industry engagement, both supported by ERDF co-funding.
- Goal 7: Reinforcing sectoral strengths:
 - DETE is developing a new **National Clustering Programme (NCP)** with a target to fund five national cluster organisations supported by a new central co-ordination entity.
- Goal 8: Monitoring progress on regional innovation, and building international connections:
 - The Smart Specialisation National Implementation Group has worked with the **Regional Development Monitor** to create a new Smart Specialisation dashboard with metrics agreed by the group.
 - In June 2024, Ireland's three NUTS 2 regions were designated as **Regional Innovation Valleys**, joining a network of 149 similarly designated regions across Europe. This initiative aims to connect less and more innovative regions, with a particular focus on addressing societal challenges through cutting edge technology.

Overall, Ireland's Smart Specialisation Strategy has laid the groundwork for inclusive regional development, sustainable innovation, and economic resilience, aiming to leverage each region's unique strengths and potential in alignment with broader EU goals.

Over the next period, the National Implementation Group will continue its work to ensure that Smart Specialisation delivers impact across Ireland's regions through our ERDF programmes and other measures. The Department of Enterprise, Trade and Employment with the support of the Implementation Group, will continue to work with the European Commission on opportunities to further promote and connect Irish regions with their peers across Europe, including through the Regional Innovation Valleys platform. The Regional Enterprise Plans Steering Committees have an important ongoing role in identifying regional opportunities and challenges from the ground up and are an essential feedback loop for the Smart Specialisation Strategy. Finally, the Department will work with the Regional Assemblies and all other partners to ensure that Smart Specialisation is subject to ongoing monitoring and evaluation so that it can continue to respond to the changing opportunities and challenges of our regional innovation system.

Introduction

Ireland's National Smart Specialisation Strategy for Innovation 2022-2027

Smart Specialisation is a place-based innovation policy concept promoted by the European Commission. Applied in practice, it aims to boost innovation-driven sustainable regional growth models by harnessing local sectoral strengths and emerging areas of opportunity, and by fostering collaboration between businesses, research institutions, public authorities and civil society to realise their potential.

As a strategy, Smart Specialisation can also provide a roadmap to address important challenges at a regional level, while emphasising the importance of research and development, skills and entrepreneurship.

The European Commission included the development of a Smart Specialisation Strategy as an essential requirement for member state drawdown of European Regional Development Fund (ERDF) under Programme Objective 1, A Smarter Europe – innovative and smart economic transformation.

The Smart Specialisation methodology advocated by the European Commission is characterised by the identification of strategic areas for intervention supported by an analysis of geographical strengths and potential of an economy, as well as through an Entrepreneurial Discovery Process (EDP) which means facilitating broad and locally based stakeholder consultation.

To guide the development of Ireland's Smart Specialisation Strategy, a number of key policy priorities were taken into consideration which also provided a frame of reference for the public consultation and stakeholder engagement undertaken:

- Digitalisation and digital transformation;
- Green transformation for enterprise;
- Innovation diffusion;
- International collaboration on research, development and innovation (RD&I);
- Improving the national or regional enterprise research and innovation (R&I) system.

The Department of Enterprise, Trade and Employment (DETE) published Ireland's National Smart Specialisation Strategy for Innovation 2022 to 2027 in July 2022. The Strategy was informed by a two-stage EDP consultation process, comprising engagement with regional stakeholders through DETE's Regional Enterprise Plans (REPs) framework and further supported by an open public consultation process to garner perspectives about regional sectoral strengths and opportunities in Ireland.

Regional sectoral strengths and emerging areas of opportunity

Stakeholder consultations for the Strategy highlighted existing and emerging sectoral areas of strength across Ireland's three NUTS2 regions (see Table 1) and also identified subsectors and niches within these areas considered to offer potential for innovation driven growth.

This analysis forms a critical component of Ireland's Smart Specialisation Strategy and reflects where stakeholders felt that investment should be focused through the ERDF.

Table 1 Regional sectoral strengths and emerging areas

Northern and Western Region	Eastern and Midland Region	Southern Region
Sectoral strengths and emerging areas of opportunity		
Advanced Manufacturing and Engineering	Advanced Manufacturing	Advanced Manufacturing
AgriFood and AgriTech	Audiovisual	Automotive/Aerospace
Audiovisual/Creative	Biopharma/Life Sciences	Design
ICT and ICT Services	Engineering	Financial Services
Life Sciences, MedTech and Medical Devices	Financial Services/FinTech	Food/AgriTech
Marine and Blue Economy	Food/AgriTech	ICT
Renewable energy, Climate Change mitigation and sustainability	ICT	Marine/Maritime
		Pharma/MedTech
		Renewable Energy

High-level strategic goals and deliverables to support smart specialisation

To support the identified regional strengths and opportunities, eight high-level strategic goals were identified in Ireland’s Smart Specialisation Strategy (see Table 2).

In line with the priorities for the Strategy set out above, the eight Strategic Goals address the need to drive innovation and new opportunities for growth at a sectoral level; meet the challenges of the twin green and digital transitions across all sectors; improve innovation diffusion; strengthen the regional enterprise R&I system; and encourage more international regional collaboration on RD&I.

This Progress Report sets out how Ireland has advanced initiatives across each of these high-level Strategic Goals.

Table 2 Ireland’s Smart Specialisation Strategy for Innovation 2022-2027 – High-level Strategic Goals

High-Level Strategic Goals	
1	Smart Specialisation Strategy for Ireland will link national and regional enterprise and innovation policy, connecting the statutory RSEs, Regional Enterprise Plans, Impact 2030: Ireland’s Research and Innovation Strategy, and will bring greater policy coherence at multiple levels of governance.
2	Smart Specialisation will support the adoption of the European Regional Development Fund in Ireland by supporting Policy Objective 1, A Smarter Europe.
3	Smart Specialisation will improve research and innovation capacity in Ireland’s regions.
4	Smart Specialisation will encourage more regionally dispersed RD&I, strengthen the enterprise base and identify emerging areas of opportunity.
5	Smart Specialisation will increase the regional uptake of new advanced technologies to increase the reach of the twin green and digital transformation throughout Irish enterprise.
6	Smart Specialisation will drive the development of skills needed for enhancing innovation activity across the economy.
7	Smart Specialisation will encourage the maximising of sectoral strengths through clustering and the scaling of Ireland’s existing areas of research excellence.
8	Smart Specialisation will lead to a greater visibility and coherence of the innovation system in Ireland’s regions both nationally and in Europe.

Strategy implementation and metrics

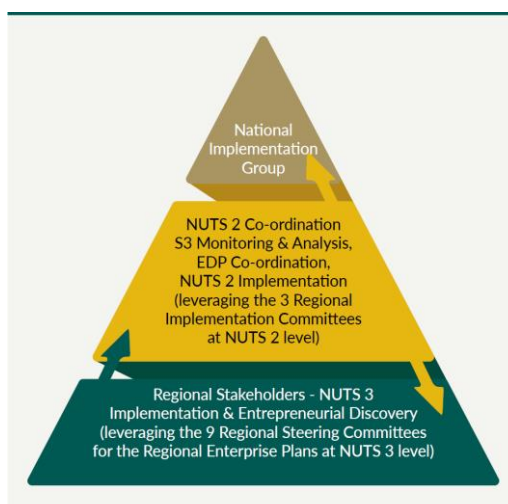
Implementation of Smart Specialisation requires co-ordination between regional, national and EU institutional actors, and among regional administration and territorial actors. As part of the development of the Strategy, a multi-level oversight structure was set out (see Figure 1) and this is now in operation.

A Smart Specialisation National Implementation Group was established to oversee the delivery of the Strategy’s national and regional priorities in December 2022. The Group, chaired by DETE, comprises representatives of the Departments of Further and Higher Education, Research, Innovation and Science (DFHERIS); Public Expenditure, NDP Delivery and Reform (DPENDPR); and the Environment, Climate and Communications (DECC). The Group further includes the three Regional Assemblies; Enterprise Ireland (EI); IDA Ireland; and Taighde Éireann-Research Ireland.

The Group meets every six months with updates from all the above bodies which regularly consult with local enterprises, elected officials, academics and members of the public. This, in turn, ensures a continuous and wide-ranging feedback loop for the Strategy.

Representatives of the three Regional Assemblies sit on both the Smart Specialisation Strategy National Implementation Group and the Steering Committees for the REPs. This further strengthens the feedback loop and ongoing entrepreneurial discovery so that the Strategy remains relevant and informed from the bottom-up.

Figure 1 Smart Specialisation Strategy multi-level oversight and ongoing ‘bottom-up’ entrepreneurial discovery



Identification of metrics to monitor impact of the Strategy

The National Implementation Group has agreed a set of indicators which will be monitored on an ongoing basis to track progress in quantitative terms. These indicators are set out in Appendix 3. DETE has worked with the three Regional Assemblies and the All-Island Research Observatory (AIRO) at Maynooth University to reflect and monitor these indicators through the inclusion of a new smart specialisation dashboard on the Regional Development Monitor (RDM), a data mapping and visualisation platform (see more details in Chapter 8).

Overall, latest data shows that in 2023 Irish performance was driven by the Eastern and Midland Region (EMR), with the Southern Region (SR) and Northern and Western Region (NWR) following behind.

Table 3 Regional Innovation Scoreboard 2023 ¹

Region	Regional Innovation Scoreboard	Rank in Europe
Northern and Western	104.5	90
Southern	105.4	86
Eastern and Midland	124.0	42

Within regions, the NWR has a relative concentration of trademark applications compared to other regions in Ireland, while international scientific co-publications are highest in the EMR. Furthermore, across all three regions, Ireland has drawn down over €781 million from Horizon Europe, showing that we are engaging with partners across Europe.

¹ https://ec.europa.eu/assets/rtd/ris/2023/ec_rtd_ris-regional-profiles-ireland.pdf

1. Linking national and regional enterprise and innovation policy

Strategic Goal 1:

Our new Smart Specialisation Strategy for Ireland will link national and regional enterprise and innovation policy, connecting the statutory RSEs, Regional Enterprise Plans, Impact 2030: Ireland's Research and Innovation Strategy and other national policies and will bring greater policy coherence at multiple levels of governance.

Summary

Strategic Goal 1 seeks to ensure that our Smart Specialisation objectives continue to inform policy development, coherence, and implementation. The inter-departmental National Implementation Group for the Smart Specialisation Strategy is now playing a key role in putting a focus on place-based innovation needs and opportunities across a range of policy initiatives.

By bringing a regional perspective to innovation policy development, the preparation of Ireland's Smart Specialisation Strategy has informed a range of enterprise and innovation strategies including Impact 2030: Ireland's Research and Innovation Strategy, the Enterprise Policy White Paper, and the nine REPs, as well as providing insights into the development of new policies and strategies.

Embedding Smart Specialisation within national and regional strategies

The inter-departmental and cross-agency National Implementation Group for Smart Specialisation enables consideration of place-based innovation by a range of policy actors. This ensures continued alignment between national enterprise and innovation policies and emerging innovation promotion initiatives. For example:

- Under **Impact 2030: Ireland's Research and Innovation Strategy**, the policy objective of Smart Specialisation forms a core part of the ambition for 'innovation driving enterprise success', by increasing enterprise innovation performance in all regions and maximising opportunities for innovation diffusion. DFHERIS is represented on the National Implementation Group for Smart Specialisation, while DETE is represented on Impact 2030 governance structures, ensuring continued engagement and alignment on place-based innovation perspectives and policy initiatives.
- Ireland's Smart Specialisation Strategy has informed the **White Paper on Enterprise 2022-2030** priority pillar, 'Stepping up Enterprise Innovation', which aims to drive increased levels of innovation performance in enterprise while maximising the opportunities for innovation diffusion across regions and sectors. The White Paper supports regional economic and enterprise development through the work of the enterprise agencies.
- Led by DETE, **Promoting RD&I in Powering Prosperity – Ireland's Offshore Wind Strategy** endeavours to foster a thriving RD&I ecosystem for the sector. The Strategy states that by 2030 Ireland will establish an Offshore Wind Centre of Excellence with a new Floating Offshore Wind Demonstrator site to support growth and innovation. DETE is closely engaged with the Department of the Environment, Climate and Communications on progressing these key ambitions and corresponding detailed actions. Enterprise Ireland, IDA Ireland, Sustainable Energy Authority Ireland (SEAI) and Taighde Éireann-Research Ireland are all members of the DETE Offshore Wind RD&I Working Group, which facilitates collaboration

and communication on industry-focussed RD&I. These agencies also offer an extensive range of programmes and supports to promote investment in RD&I, and DETE intends to highlight these through a targeted communications campaign planned from Q4 2024 through 2025.

- A strengthened national approach to clustering through the forthcoming **National Clustering Programme** will be an enabling factor in encouraging collaborative research and innovation and collective action among firms in key sectors of activity for Ireland and its regions.
- **Regional Enterprise Plans**, which are driven by regional stakeholders, complement the work of the enterprise agencies in identifying specialisms and championing initiatives where that region has a competitive advantage or capability in certain economic sectors. The industry led Steering Committees for these Plans are an important feedback loop for national policy development and oversight of Smart Specialisation.
- The **National Planning Framework (NPF)** and the three **Regional Spatial and Economic Strategies (RSEs)** provide a statutory forward planning framework to enable more balanced regional development in Ireland. Smart Specialisation is a key economic development principle adopted in these high-level statutory frameworks. At NUTS2 level, the RSEs provide an evidence base and framework through which the Regional Assemblies can guide future growth and investment, in line with the overarching National Planning Framework, including through their management and oversight of ERDF regional programmes.
- The Department of the Environment, Climate and Communications (DECC) launched its inaugural **Research and Innovation Strategy to 2030** in May 2023. Aligned with Smart Specialisation, DECC's strategy endeavours to harness the full potential of R&I to achieve Ireland's goals in support of the green and digital transformations. The strategy is also committed to working with the Smart Specialisation Strategy National Implementation Group to maximise Ireland's engagement in EU R&I programmes.

Smart Specialisation Strategy in practice through DETE's REPs

DETE's REPs and the industry-led REP Steering Committees have assumed a central role in Ireland's S3 and its ongoing implementation. Continued bottom-up stakeholder engagement through the Committees ensures that regional enterprise priorities are identified and supported and that the entrepreneurial discovery process employed in the creation of Ireland's Smart Specialisation Strategy continues to inform implementation at the national level.

The recently published mid-term progress reports for the REPs contain updates on regional sectoral strengths and on how Smart Specialisation is being supported in each region through the Plans' implementation. For example:

- The **Midlands REP** is focused on driving growth in ICT, Advanced Manufacturing/Engineering sectors and Food/AgriTech sectors with working groups established to drive key initiatives in the region.
- The **North-East REP** identifies financial services, AgriFood, Health, Energy and Sustainability sectors as sectors of potential growth for the region. Key initiatives in support of these sectors of strength include the work of the Connected Health and Wellbeing Cluster; dConnect; the CREDIT Tech Gateway for Energy Efficiency; and Agri Forum.
- The **North-West REP** has highlighted Advanced Manufacturing, Marine and Blue Economy, and Renewable Energy as key sectoral opportunities, supported by the work of the Advanced Innovation in Manufacturing (AIM) Centre in Sligo; the Killybegs Marine Cluster in Donegal; and the work of the Sligo Leitrim Energy Agency, which was formally established in 2022.

- The **West REP** identifies key regional strengths in the Creative sector, Blue economy, and Life Sciences, including Medtech. These sectors of strength are being progressed through the work of CREW (Creative Enterprise West); the BIA Innovator Campus; the Marine Institute; Údarás-led initiative Nua Na Mara; and the development of a Western Regional Life Sciences Hub.
- The **Mid-West REP** is overseeing efforts to support the region's Smart Specialisation priorities through the opening of Digital Manufacturing Ireland in Limerick; the Future Mobility Campus Ireland in Shannon as a centre of excellence for advanced on-road and in-air mobility solutions; and €1 million in funding to the Technological University of the Shannon (TUS) towards the development of a bioeconomy demonstration site at the Irish Bioeconomy Foundation campus in Tipperary.
- The **South-East REP** is focused on its strengths in Advanced Manufacturing, AgriTech and Sustainability, and Life Sciences sectors. These sectors of strength are being progressed through the work of South Eastern Applied Materials Research Centre (SEAM), SETU; and a Life Science Cluster based in Kinetic Labs.
- The development of the AgriFood sector, the Creative and Content Creation sector, and the transitioning to a low-carbon economy are among the main sectors with high employment and innovation capability identified in the **Mid-East REP**.
- In the **South-West REP**, ongoing efforts to support the region's Smart Specialisation priorities include the Smart Southern Region project mapping tool; and the Horizon Europe funded Reference Observatory of Basins for International hydrological climate change detection (ROBIN) project to accelerate circular bioeconomy targets.
- The **Dublin REP** is focused on its strengths as a global hub for international investment and high-value jobs in ICT, Biopharma/Life Sciences, financial and business services. Enterprise hub provision in Dublin has been reviewed with a live ecosystem map produced which features enterprise hubs and their contact details across the region. This map also incorporates other ecosystem supports and educational institutions.

2. Enabling “A Smarter Europe”

Strategic Goal 2:

Smart Specialisation will support the adoption of the European Regional Development Fund in Ireland by supporting Policy Objective 1 ‘A Smarter Europe’

Summary

Smart Specialisation is fundamental to developing more competitive regions, one of the key strategic outcomes under PO1 of the ERDF. The policy objective focuses on innovative and smart economic transformation by enhancing research and innovation capacities and the uptake of advanced technologies, as well as enhancing growth and competitiveness of SMEs. The European Commission made drawdown of funds under PO1 of the ERDF contingent on Member States having a Smart Specialisation Strategy in place and further supported by a range of fulfilment criteria.

Strategic Goal 2 has been achieved through the publication of Ireland’s Smart Specialisation Strategy; European Commission confirmation that Ireland had satisfied all fulfilment criteria for the Strategy; and the subsequent approval by the Commission of Ireland’s ERDF regional funding programmes.

European Commission approval of Ireland’s Smart Specialisation Strategy

Following approval by the European Commission in May 2022, DETE published Ireland’s National Smart Specialisation Strategy for Innovation 2022-2027 on 11 July 2022.

Tied to this, Ireland was also required to carry out a self-assessment of seven fulfilment criteria associated with Smart Specialisation that demonstrated ‘good governance of national or regional smart specialisation strategy’ as set out in the European Commission’s Cohesion Policy legislative package (see Appendix 4). On 16 August 2022, the European Commission approved Ireland’s self-assessment that the seven fulfilment criteria had successfully been met.

Launch of Ireland’s two ERDF regional programmes underpinned by Smart Specialisation

Following their formal approval by the European Commission as part of Ireland’s overall Cohesion package of funding, in November 2022, the then Minister for Public Expenditure and Reform, Michael McGrath, together with the Southern Regional Assembly (SRA), Northern and Western Regional Assembly (NWRA) and the Eastern and Midland Regional Assembly (EMRA), launched Ireland’s two ERDF Programmes for the period 2021-2027 for €853 million, of which €396 million is financed by the EU. The ERDF comprises of two regional operational programmes as follows:

- Managed by the NWRA, the Northern and Western Regional Programme is a €217 million co-funded programme of investment, supported by €130 million of EU funding and €87 million of national funding provided by the Exchequer.
- The Southern, Eastern and Midland Regional Programme, managed by the SRA, with significant collaboration from the EMRA, is a €663 million co-funded programme of investment, supported by €265 million of EU funding and €398 million of national funding.

Both programmes make a significant commitment to addressing ERDF PO 1 and Smart Specialisation through committing investment in building RD&I capacity within the public research institutions in the regions, as well as by strengthening regional innovation ecosystems.



Pictured at the launch of Ireland's two ERDF Programmes for the period 2021-2027 in November 2022 were the then Minister for Public Expenditure and Reform, Michael McGrath, together with the Southern Regional Assembly, Northern and Western Regional Assembly and the Eastern and Midland Regional Assembly

ERDF co-funded schemes under PO 1 – A Smarter Europe

A total of €445.6 million has been allocated to deliver six schemes under PO 1 of Ireland's ERDF package, across the NWR and the SR and EMR. These schemes are most closely aligned with our Smart Specialisation Strategy and are being delivered by Enterprise Ireland (EI); Taighde Éireann-Research Ireland; and the Higher Education Authority (HEA).

Four of the schemes have been developed and launched by Enterprise Ireland:

- **Technology Gateways** – to support regionally dispersed academic-industry collaboration synchronised with industry needs through the Technological Universities.
- **Knowledge Transfer (KT) Boost** - provides technology transfer specialists to help with commercialisation and collaboration opportunities between research and enterprise
- **Innovators' Initiative** - develops and delivers immersive needs-led innovation training programmes to create innovation leaders and entrepreneurs in high-growth potential sectors with a view to creating more deep-tech start-ups.
- **Smart Regions Enterprise Innovation Scheme (SREIS)** – supports the development of innovative services through local infrastructure, innovation clusters, services to SMEs and early-stage feasibility and priming research.

Research Ireland is overseeing **ARC (Accelerating Research to Commercialisation) Hubs**, which establishes three regional smart hubs for research, training, innovation, commercialisation.

The HEA is supporting capacity of the new Technological Universities to drive and support regional research, capacity building and innovation through the **TU RISE** programme.

Calls for proposals have been launched for all six schemes. As of 31 May 2024, operations have been selected and grants awarded under four of the six schemes amounting to 43% of the total programme allocation under PO1. Selection of operations and grant awards are imminent under the remaining two schemes. The managing authorities and intermediate bodies ensure all selected operations are consistent with the Ireland's Smart Specialisation Strategy.

3. Improving research and innovation capacity in Ireland's regions

Strategic Goal 3:

Smart Specialisation will improve research and innovation capacity in Ireland's regions

Summary

Strategic Goal 3 of Ireland's Smart Specialisation Strategy aims to increase the intensity of business R&D across all regions, through the delivery of new and enhanced agency interventions, especially those focused on strengthening industry-academic collaboration.

Enabled by Ireland's two ERDF regional programmes a range of new and extended schemes are specifically targeting increased industry-academic collaboration and boosting potential for innovation and commercialisation across Irish regions. This is supported by the ongoing work of our enterprise agencies promoting RD&I supports at the firm level.

Business Expenditure on Research and Development (BERD) continues to grow

The Central Statistics Office (CSO) BERD Survey is a targeted survey issued to all enterprises actively engaged in R&D across all business sectors of the economy. The most recent BERD for 2021 to 2022 was released on 4 May 2023. It showed actual R&D expenditure across Ireland in 2021 (€3.88 billion) was 19% higher when compared with 2019 (€3.26 billion). IDA Ireland, for example, is on track to deliver 170 additional RD&I investments, and cumulative RD&I investment of €3.8 billion, by client companies in the period 2021-2024. EI has ambitious goals of ensuring enterprise expenditure on R&D to reach 300 R&D projects of over €100,000 supported and to improve productivity with 2.5% annually.

Box 1 Regional Business Expenditure on Research and Development

- Total R&D spending in the Eastern and Midland Region amounted to €2.49 billion in 2021, accounting for 64.3% of all R&D expenditure.
- The Southern Region accounted for €1.05 billion or 27.0%, and the Northern and Western Region accounted for €338.1 million or 8.7%.
- In the Northern and Western Region, current expenditure accounted for 95.9% of all R&D expenditure, compared with 91.7% for the Southern Region and 86.4% for the Eastern and Midland Region.

Building Technological University capacity to engage with industry – TU RISE

The ERDF funded TU RISE scheme assists higher education institutions (HEIs) in the technological sector to build and increase research capacity and human capital with a focus on enhancing engagement with regional enterprises. By February 2024, nearly €84 million was competitively awarded to eligible HEIs across Ireland.

Of this, €20 million has been provided to the Atlantic Technological University in the NWR. This funding will be used to support 60 PhD scholarships across five cohorts of 12 PhD studentships, with each cohort collaborating with at least one enterprise in the region. Studentships supported under this

TU RISE project will create a pool of highly skilled researchers in the NWR, while serving as a bridge between academia and regional enterprise across key sectors including Advanced Manufacturing and Engineering; AgriFood and AgriTech; Audiovisual/Creative; ICT and ICT Services; Life Sciences, MedTech and Medical Devices; Marine and Blue Economy; Renewable Energy, Climate Change Mitigation and Sustainability.

KT Boost driving research commercialisation in the regions

Launched in December 2023 with the support of ERDF funding, KT Boost provides resources and support to Innovation Offices/Technology Transfer Offices (TTOs) in HEIs across Ireland, to drive knowledge and technology transfer to industry, and the creation of spin-out companies from academic research.

KT Boost funds recruitment, skillset development and training within Innovation Offices to ensure HEIs have the right people with the right skills to propel research commercialisation in HEIs. The activities supported under KT Boost will lead to enhanced SME engagement and commercialisation intensity at regional level. The Programme is expected to accelerate the rate of high potential start-up (HPSU) companies evolving from research spin-outs while also increasing the volume of intellectual property (IP) licences and research collaboration agreements for these companies.

KT Boost is managed by Knowledge Transfer Ireland (KTI), on behalf of Enterprise Ireland. The total budget for supports available for the four-year programme is €33.4 million, of which €5.34 million is for beneficiaries located in the NWR.

Regionally distributed EI Technology Centres and Research Ireland Research Centres driving industry-academic collaborations

The Technology Centres programme administered by EI is well placed to support Smart Specialisation. Currently, nine Technology Centres with strong sectoral and regional focus are located around Ireland and are resourced by highly qualified researchers who provide a unique ecosystem for academic-industry collaboration that is determined by industry. Technology Centres are important actors in helping businesses to embark on an innovation journey that can boost enterprise resilience and open new opportunities for business growth and productivity. They are also important players in promoting innovation diffusion through the membership networks they build and the collaborative research that they foster both within and outside their immediate regional location.

Box 2 Construct Innovate – Ireland’s newest Technology Centre

Construct Innovate is an industry-led research centre involving the academic consortium of University College Dublin, Trinity College Dublin, University College Cork, the Irish Green Building Council, and the host institution, University of Galway. It is the newest of nine centres in EI’s industry-led Technology Centre network and the Centre’s vision is to make Ireland a global research and innovation leader for sustainable construction and built environment technology.

The Centre brings together 23 multidisciplinary research groups with over 300 researchers across the partner institutions. The Centre’s research expertise includes digital adoption; modern methods of construction (MMC); sustainability; productivity, affordability and cost; skills and training; and collaboration.

Construct Innovate accelerates innovation in construction and the built environment by bringing together the whole value chain. With active engagement with its members, partners, plus a European network of innovation clusters, its immediate focus is to address industry challenges in the area of residential construction.

Research Ireland Centres are regional networks of universities which engage with companies across regions in Ireland, aligned with areas of regional strength as defined in the Smart Specialisation

Strategy. The Centres are delivering systemic impact, providing talent and innovative solutions to Ireland's economic, societal and environmental challenges in important sectoral areas including manufacture of medical devices, photonic integration science and technology, and developing new AgriFood technologies.

Research Centres have delivered research excellence in areas of national priority and are developing a pipeline of talented researchers with critical, in-demand skills. They have created an environment where multi-institutional and multidisciplinary collaborations are the norm, and where academia engages in deeply collaborative research partnerships with indigenous and multinational industries to deliver internationally leading research, cutting-edge technologies and advancements.

4. Encouraging more regionally dispersed RD&I

Strategic Goal 4:

Smart Specialisation will encourage more regionally dispersed RD&I, strengthen the enterprise base and identify emerging areas of opportunity.

Summary

Strategic Goal 4 aims to build on each region's strengths and emerging areas of opportunity by strengthening the capacity for businesses to engage in RD&I and addressing gaps in existing regional innovation infrastructures. It also seeks to identify opportunities to enable inter-regional collaboration through the REP implementation structures.

Supported by ERDF funding and underpinned by the work of the REPs initiative, regionally based actors can drive local and regional initiatives to create new enterprise opportunities and innovation driven growth in their region through the €145 million SREIS. The REPs national oversight group, chaired by the Minister for Enterprise, Trade and Employment promotes inter-regional collaboration.

Strengthening regional innovation ecosystems through the Smart Regional Enterprise Innovation Scheme (SREIS)

Up to €145 million in funding is available to support projects aligned to the nine REPs through the new SREIS. Co-funded by the ERDF, the first call for SREIS was launched in October 2023. The Scheme is aimed at accelerating economic growth and Smart Specialisation in all regions by working with stakeholders to create a supportive ecosystem around regional enterprise strengths and emerging areas of potential, with particular regard to the areas of opportunity outlined in the REPs.

SREIS supports the development of innovative services through local infrastructure; innovation clusters; services to SMEs; and early-stage feasibility and priming research. Funding is strategically targeted at locations where an identifiable deficit exists in innovation infrastructure necessary to support enterprises. SREIS provides an opportunity to unlock potential and accelerate economic growth in all regions through a collaborative approach, working with regional stakeholders to deliver on their potential enterprise strengths and opportunities.

SREIS has four streams which support the following activities/projects:

- **Local Infrastructure projects** – funding is provided to not-for-profit designated activity company/ company limited by guarantee to construct or upgrade local infrastructure which supports enterprise development and where a gap in the regional ecosystem has been identified.
- **Innovation clusters and consortia** – funding is designed to maximise enterprise collaboration between undertakings (startups, SMEs and other stakeholders in the ecosystem) through clustering, thereby stimulating growth and development of new or established clusters and consortia in a regional, cross-regional, or national setting.
- **Services to SMEs to drive innovation solutions** – funding is designed to be strategic in supporting the transformation of regional SMEs.

- **Feasibility and Priming Grants** – funding for costs towards the investigation of new projects from early-stage concepts to development of business propositions or through priming funding to support detailed development of projects through design/costing and planning to enable an application for project support at a future stage.

Enabling inter-regional collaboration through the REPs implementation structures

The Minister for Enterprise, Trade and Employment and Ministers of State, jointly chair a National Oversight Group for the REPs, which oversees implementation and encourages sharing of best practice and collaboration across regions.

By way of example, following a request from the then Minister for Enterprise, Trade and Employment in late 2023, several of the REPs with an interest in the area have established Offshore Wind Working Groups with actions or work programmes to support the development of offshore wind in their respective regions to further reinforce the ambition in the Offshore Wind Industrial Strategy at the national level.

5. Advancing the twin green and digital transformation

Strategic Goal 5:

Smart Specialisation will increase the regional uptake of new advanced technologies to increase the reach of the twin green and digital transformation throughout Irish enterprise.

Summary

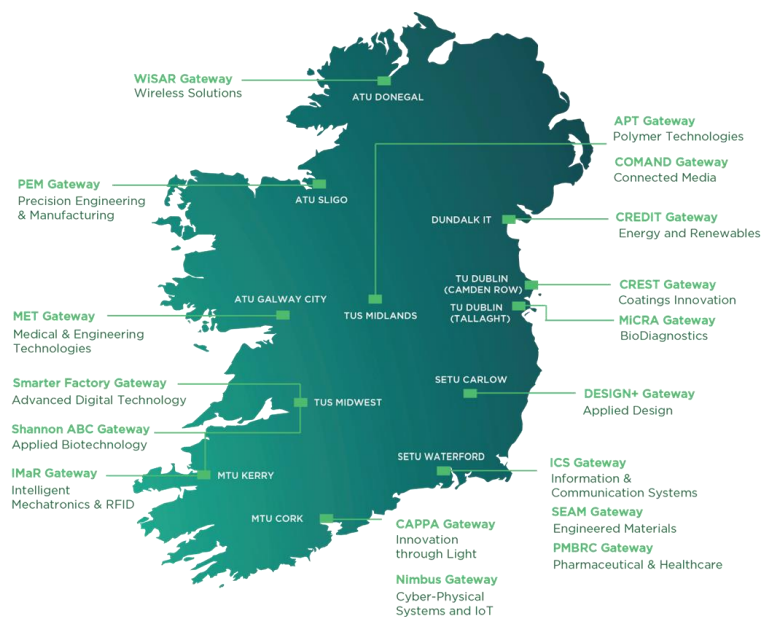
Through successive innovation and enterprise strategies and policies, the uptake of digital technologies by SMEs in Ireland is relatively advanced compared to other EU and OECD countries. Furthermore, a recent Uisce Éireann survey found nine in ten SMEs are seeking to retain or bolster investments toward sustainability in the next 12 months, which is a consistent trend since 2022.

However, challenges remain in increasing the reach of the twin digital and green transition. Investment in collaborative R&D is fundamental to the identification and widespread application/uptake of new and improved digital and green technologies. Accordingly, Strategic Goal 5 aims to further drive industry-academic collaboration to support an internationally competitive enterprise base while also encouraging new green and digital technology adoption in Irish businesses. EI's Technology Gateway network; the new European Digital Innovation Hubs (EDIHs) and Digital Manufacturing Ireland (DMI) are key initiatives in support of this Goal.

Technology Gateways promoting research collaboration and the uptake of new technologies

EI's Technology Gateway Network focuses on key technology areas aligned to industry needs in areas such as polymers, photonics, coatings, industrial design, mechatronics, biotechnology, pharmaceuticals, wireless technologies and precision engineering. The 17 Gateways are dispersed regionally, operating through the Technological Universities.

Figure 2 Regional Locations of EI's 17 Technology Gateways



Each Gateway works in conjunction with industry to aid the research and development of innovative products and services through a dedicated team of full-time researchers and engineers. The Gateways act as a bridge between research groups in a host institution and local companies, targeting industry sectors relevant to the core capabilities of the nominated research group.

Technology Gateways enable interaction between the companies and the host, help the companies articulate their technical issues which need to be resolved, source State or EU funding where appropriate, and ensure projects are delivered successfully. Furthermore, a company in one region can work with a research group in another by utilising their local Technology Gateway as the access point. Notably, 86% of companies using the Gateways are located outside Dublin with 73% of them SMEs.

The Technology Gateways are playing an important part in supporting and enabling businesses to engage with the twin green and digital transition. For example:

- The **Smarter Factory Technology Gateway at the Technological University of the Shannon** serves as a centre of excellence for Industry 4.0/5.0, focusing on driving digital and green transformation to support innovative enterprises and shape the future of manufacturing.
- The **CREDIT Gateway** applies emerging technologies, expertise and specialist knowledge across the energy and renewables sector to help innovative businesses and companies succeed in the introduction of new and improved processes, products and services.
- The **WiSAR Gateway**, based in Atlantic Technological University Donegal, provides solutions to Irish industry for the Internet of Things (IoT) using expertise in RF, wireless, embedded systems and related software.

EDIHs increasing the reach of digital transformation

Introduced as part of the European Commission's Digital Europe Programme, to shape digital transformation over the 2021-2027 programming period, EDIHs serve as one-stop shops with research performing organisations (RPOs) at the core, providing access to technical expertise and experimentation, as well as innovation services, and the training and skills development necessary for successful digital transformation. The EDIH network now established across Europe has created opportunities for regions to confront industrial challenges linked to the digital transition.

Ireland's four EDIHs are now operational, guided at the national level by Enterprise Ireland:

- **CeADAR**, led by Ireland's EI/IDA Technology Centre in Applied Data Analytics and Machine Intelligence based in UCD, is focused on supporting AI transformation in SMEs and public service organisations.
- **Data2Sustain**, led by Atlantic Technological University Sligo, aims to increase the transformation capacity of SMEs in the NWR with a focus on circular economy, operations and sustainability areas.
- **ENTIRE**, led by Tyndall National Institute Cork, is helping SMEs and start-ups become more competitive in their business/production processes using digital technologies such as Internet of Things and sensors.
- **FactoryxChange**, led by the EI-funded Irish Manufacturing Research in Mullingar, is focused on supporting factories embrace ecological, digital and societal challenges.

Box 3 Two key national level strategies supporting digital transformation

The National Cyber Security Strategy

The National Cyber Security Strategy 2019-2024 aims to ensure that the employment market has sufficiently skilled and trained staff in this critical area. Such measures taken to address this are:

- The launch of the Smart Futures Programme by Research Ireland to promote cyber security as a career option in schools and colleges.
- Programmes to support the development and deployment of training in computer science and cyber security at second and third level, including, for example, the work of Skillnet Ireland in developing training programmes for all educational levels and supporting SOLAS initiatives for ICT apprenticeship programmes in cyber security.

To further expand the indigenous cyber security industry and its research activities, the National Cyber Security Centre has supported Cyber Ireland, a cyber security cluster including industry, academia, and Government.

A mid-term review of the National Cyber Security Strategy 2019-2024 called for a whole-of-government strategy to commit to building an indigenous cyber security industry. The forthcoming Cyber Industrial Strategy will be Ireland's first industrial strategy for the cyber security sector.

The Digital Connectivity Strategy

The Department of the Environment, Climate and Communication's (DECC) R&I Strategy emphasises that delivering the green and digital transformations will depend on evidence from a wide range of fundamental and applied research, including multi- and transdisciplinary research.

DECC's Digital Connectivity Strategy recognises the need to facilitate and promote research and innovation in new emerging technologies such as quantum. During 2023, DECC committed €5 million to a project to deploy a pilot Quantum Communication Infrastructure (QCI) network across Ireland by 2024. This funding matched €5 million in EU funding secured by the IrelandQCI consortium from the EU's Digital Europe Programme.

DMI supporting digitalisation and upskilling of Ireland's manufacturing sector

DMI, the new national centre of excellence to aid digital transformation in manufacturing, was officially opened by the then Minister for Enterprise, Trade and Employment, Simon Coveney TD, at the IDA Ireland National Technology Park in Limerick in March 2023.

Backed by €40 million in IDA Ireland investment, DMI is designed to support Irish-based manufacturers in accelerating their adoption of digital technologies and drive economic competitiveness. Industry-led, and resourced to solve manufacturing industry challenges, it will be a leader for world-class digital and smart manufacturing, instrumental in ensuring the future resilience and competitiveness of Irish-based manufacturing.

DMI will develop a pipeline of digitalisation projects for the manufacturing sector and is on track to engage 400 companies across Ireland, to commence digitalising with awareness and advisory assistance. This Centre will work with existing manufacturing centres such as Irish Manufacturing Research (IMR) to ensure a collaborative and cohesive manufacturing ecosystem for Irish companies to engage with, upskill staff and develop new Industry 5.0 technologies.

Assisting the green transition through the EU Just Transition Fund

The EU Just Transition Fund (EU JTF), created under the 2021-2027 EU programming round, helps communities across Europe meet the challenges posed by the transition to a zero-carbon economy, supporting them to meet the challenges of the green transition while assisting in the transition to a climate-neutral economy.

In Ireland, the EU JTF is focused on the wider Midlands region. Counties Laois, Westmeath, Offaly, Longford and Roscommon, along with the municipal districts of Ballinasloe in Galway, Carrick-on-Suir and Thurles in Tipperary, Athy and Clane in Kildare, are covered by the EU JTF.

Administered by EMRA, up to €169 million is available to the region, complementing the ERDF priorities of developing smarter, more competitive, greener and more energy efficient regions. Projects under the EU JTF include the Lisheen BioScaleUP, a platform for the collaboration between RPOs through the BiOrbic Bioeconomy Research Centre, SMEs, and large industry for biorefinery and biomanufacturing; and the Mount Lucas Circular Bioeconomy Aquaculture Demonstration Initiative (Circular IMTA). Other EU JTF projects come under the Local and Regional Economic Strategies Support Scheme (LRESSS) which spans several sectors, such as the circular economy, peat replacement for horticulture/bioeconomy, innovation in energy and resource efficiency, retrofitting, training, and upskilling, infrastructure development and scientific research.

6. Skills for innovation

Strategic Goal 6:

Smart Specialisation will drive the development of skills needed for enhancing innovation activity across the economy

Summary

The European Commission 2024 Country Report for Ireland highlighted how expertise in R&D is cited as the second highest skills shortage for SMEs. The OECD has recommended that to more effectively leverage skills to drive innovation and strengthen firm performance, Ireland should better utilise its research talent and public R&I system to drive innovation within firms. The OECD also emphasised that better leveraging of skills will be central to supporting economic growth, promoting resilience to global megatrends, and ensuring Ireland can achieve its aims of digital leadership and a just transition.

Strategic Goal 6 aims to enhance skills development and innovation activity across the regions through new and improved supports informed by existing international and national best practice. Key initiatives have been progressed, including the Research Ireland ARC Hub Programme; the Innovators' Initiative; and the establishment of Taighde Éireann-Research Ireland.

Exploring the commercial potential of academic research through the Research Ireland ARC Hub Programme

The Research Ireland ARC Hub Programme, which is co-funded under the ERDF, aims to drive regional development through a network of three Hubs, each working to optimise the translation of academic research to create new products, processes and services and to train and develop entrepreneurial scientists and engineers who are primed from an early stage to exploit the commercial potential of their research endeavours.

A 2023 competitive call for proposals closed in September 2023 and Research Ireland approved funding for an ARC Hub for ICT, hosted by Technological University Dublin, and an ARC Hub for Therapeutics, hosted by Trinity College Dublin.

The **Research Ireland ARC Hub for Therapeutics** will be jointly led by Trinity College Dublin, University College Dublin and the Royal College of Surgeons in Ireland in partnership with research bodies in the Southern and Eastern and Midland (SEM) Regions and the NWR to develop a globally recognised ecosystem for therapeutic innovation within the thematic area of Biopharma/Life Sciences, an identified key sectoral strength for the EMR under Ireland's Smart Specialisation Strategy. The Hub aims to address several current challenges in the translation of state-funded research to commercial outputs, including lack of national cohesion, funding gaps, and lack of commercial expertise in the HEIs.

The **Research Ireland ARC Hub for ICT** led by Technological University Dublin in partnership with research bodies across the regions will enhance digital transformation by providing critical support for translating ideas into market-ready products and services across digital education and online communication; healthcare and medical applications; digital infrastructure; sustainable and environmental management; and data security, privacy and governance. By specialising in translational research supports, providing funding for projects with strong impact potential and tailored entrepreneurial training supports, the Hub aims to foster ICT entrepreneurship capability.

Box 4 OECD Skills Strategy Ireland report

The OECD report, Skills Strategy Ireland: Assessment and Recommendations, published in May 2023, identifies opportunities and makes recommendations to secure a balance in skills, foster greater participation in lifelong learning, leverage skills to drive innovation and improve firm performance, and strengthen skills governance to build a joined-up skills ecosystem in Ireland.

The report was prepared by the OECD, with a cross-departmental project team with membership from DFHERIS, DETE, the Department of Education, the Department of Social Protection, the Department of Public Expenditure, National Development Plan Delivery and Reform, and SOLAS, with support from the Regional Skills Fora. It was also supported by a series of regional workshops involving over 250 representatives of, government agencies, education and training institutions, businesses and business associations, unions, community associations, think tanks and other organisations.

The report is available at: <https://assets.gov.ie/256184/c6e02dad-0790-4a53-8fda-cfe74cd0a7f4.pdf>

A second call was launched in Q3 2024, with the aim of establishing a third ARC Hub in the NWR. The deadline for submission of full proposals was 23 September 2024 with a panel review in late January 2025 and a funding decision in April 2025.

Creating high-skilled innovators through EI's Innovators' Initiative

Supported under the ERDF, the Innovators' Initiative develops a series of immersive, needs-led innovation training programmes which will create cohorts of highly skilled innovators who can identify unmet market needs within specific sectors of growth.

Each of the four education and training programmes under EI's Innovators' Initiative will receive €7 million in funding over a seven-year period. On completion of a programme, the participants can return to their respective sectors, bringing back their new skills and training. Alternatively, they can access further funding and training through EI's Commercialisation Fund with the aim of forming a high potential start-up (HPSU), directly contributing to job creation.

The four successful programmes under the Innovators' Initiative are:

- **BioInnovate**, (MedTech) hosted by University of Galway.
- **AgTechFood & Agriculture Sustainable Technology Innovation Programme (FAST-IP)**, hosted by University College Dublin and supported by Teagasc.
- **Cyber-Innovate**, (cyber security) hosted by the Munster Technological University Cork.
- **DigiBio**, (digital health) hosted by Dundalk Institute of Technology, in association with the Royal College of Surgeons, Tyndall Institute, Dublin City University and Trinity College Dublin.

Supporting skills development through Taighde Éireann-Research Ireland

In August 2024, the Minister for Further and Higher Education, Research, Innovation and Science, Patrick O'Donovan TD, announced the establishment of a new R&D funding agency Taighde Éireann-Research Ireland, which amalgamated two national research funding bodies, Science Foundation Ireland and the Irish Research Council.

The establishment of Taighde Éireann-Research Ireland is a key element in the reform of Ireland's R&I system as set out in Impact 2030, which aims to maximise its impact on national priorities and enhance its capacity to address, in particular, climate change and the digital transition. This includes

increasing EU research funding and collaborations while applying innovation to make Irish businesses more competitive.

Skills and skills development is key to the agenda of the new Agency. One of its core functions is to promote the engagement, retention and development of the skills and capacity of researchers of an excellent standard in the national system of R&I in co-operation with the HEA, EI and other bodies. The new Agency will build on the strengths of programmes, such as Research Centres, the Centres for Research Training and the Industry RD&I Fellowship Programme, to facilitate skills development through researcher and knowledge exchange between academia and industry, informed by the recently published OECD Ireland Skills Strategy Report's evidence around demand for research talent. The new Agency will also promote R&I which supports the development and competitiveness of regional enterprise and employment in collaboration with EI and other bodies.

Supporting research talent for industry through EI

Two new pilot initiatives were launched by EI during 2024, aimed at identifying and funnelling research talent to industry, with a focus on SMEs:

- The **Work Ready Graduate Programme** equips graduates with practical, industry-relevant skills, including digital competencies and industry placement. It uses the Technology Centres as sectorally aligned hubs to house the graduate cohorts, so that graduates are focussing on specific areas of industry-led research and capability, closing the gap for potential transfer to industry.
- **PhD Start** is also a new pilot programme aimed at incentivising EI clients to recruit PhD talent from the research ecosystem. PhD cohorts will be identified, allied to mentoring and upskilling in transversal skills supported by matching making with companies to ensure best fit of talent and enterprise RD&I needs.

7. Reinforcing sectoral strengths

Strategic Goal 7:

Smart Specialisation will encourage the maximising of sectoral strengths through clustering and the scaling of Ireland's existing areas of research excellence.

Summary

Ireland's Smart Specialisation Strategy recognises clustering as a key tool for achieving enterprise policy objectives, including driving innovation, attracting and embedding foreign direct investment (FDI) and developing linkages between multinationals and indigenous firms. It also notes the role that clustering can play in the green and digital transitions.

Strategic Goal 7 is supported by the development of a new national clustering policy framework which will see the establishment of cluster organisations of scale.

Development of a National Clustering Programme

The White Paper for Enterprise 2020-2030 proposes the establishment of a National Clustering Programme (NCP). This will see the establishment of a central co-ordination entity to bring coherence to the current clustering landscape and targets funding five national cluster organisations.

A March 2023 Grant Thornton report advises there would be "significant merit in establishing an open and multi-layer cluster programme" which encourages collaboration between Industry, Academia and Government in a triple-helix model. DETE is progressing work on a multi-layer NCP in line with this recommendation. The draft NCP is undergoing a review by The Competitiveness Institute (TIC) Network which involved a stakeholder engagement workshop in Trinity College Dublin on 23 May 2024.

Furthermore, clustering has been identified in the Offshore Renewable Energy sector as offering a mechanism to share knowledge, collectively build supply chain capacity and build new networks. With this in mind, Powering Prosperity, Ireland's offshore wind industrial strategy, includes an action which focuses on clustering, with a commitment for DETE and other stakeholders to engage with offshore wind industry partners throughout 2024 to raise awareness of and encourage participation in the forthcoming national competitive call for clusters.

Clustering initiatives in Ireland's regions

Each of the nine REPs mid-term progress reports highlights examples of clustering initiatives which are supporting key and emerging sectors at a more local level. The following are some examples of such initiatives:

- In the **Mid-East Region**, the Boyne Valley Food Hub was officially launched by the then Minister of State for Business, Employment and Retail, Neale Richmond TD, on 19 May 2023. The Hub represents approximately €2.4 million in investment by EI and Meath County Council.
- In September 2023, the Atlantic Technological University launched a project for a network/cluster in the **North-West Region** to co-lead an all-island research and innovation response to the challenges outlined in the European Chips Act.

- In the **West Region**, stakeholders have been successful in securing funding under the Shared Island Fund for the Atlantic Region of Creative Content initiative bringing together the expertise and strengths of the partner organisations to support the development a creative industries cluster, facilitated through virtual production spaces.
- In the **Mid-West Region**, the IDEAM Cluster has delivered the Digi Manufacturing 2.0 project in collaboration with Manufacturing NI and InterTrade Ireland to establish collaborations between members to drive the digital and green transitions. To date, IDEAM has supported over 40 industry collaborative projects with a combined value of over €8 million.
- In the **Dublin Region**, a MedTech cluster was established in 2022 with 31 contributing companies residing in the Guinness Enterprise Centre, enabling collaboration between its members, Tallaght University Hospital, St. James's Hospital and Children's Health Ireland.

8. Monitoring progress on regional innovation, and building international connections

Strategic Goal 8:

Smart Specialisation will lead to a greater visibility and coherence of the innovation system in Ireland's regions both nationally and in Europe.

Summary

Under this Strategic Goal, the Smart Specialisation Strategy placed an emphasis on establishing the oversight structures at national and regional level, as well as a monitoring approach, for the Strategy. The agreed metrics and oversight structures now in place are described earlier in the Introduction to this report.

DETE has also worked closely with DFHERIS to reflect the objectives of Ireland's Smart Specialisation Strategy in the national innovation policy, Impact 2030. DFHERIS is represented on the National Implementation Group for the Strategy.

There has been ongoing engagement with the European Commission in relation to Smart Specialisation as also envisaged under this Strategic Goal, especially in the area of international regional collaboration (e.g. Regional Innovation Valleys).

This Chapter details key initiatives that have been progressed under this Goal, such as effective monitoring of Smart Specialisation impact through the Regional Development Monitor (RDM); and international regional collaboration on innovation through Regional Innovation Valley (RIV) designation for Ireland's regions. The Chapter also details a range of international collaborative relationships on innovation involving Ireland and its regions, including through Horizon Europe.

Smart Specialisation monitoring through data visualisation

Smart Specialisation Strategy monitoring is an EU requirement under the ERDF programming period 2021-2027 and is considered a strategic management tool to assist policymakers to assess the completion of Strategic Goals while identifying those elements to be further assessed in evaluation exercises.

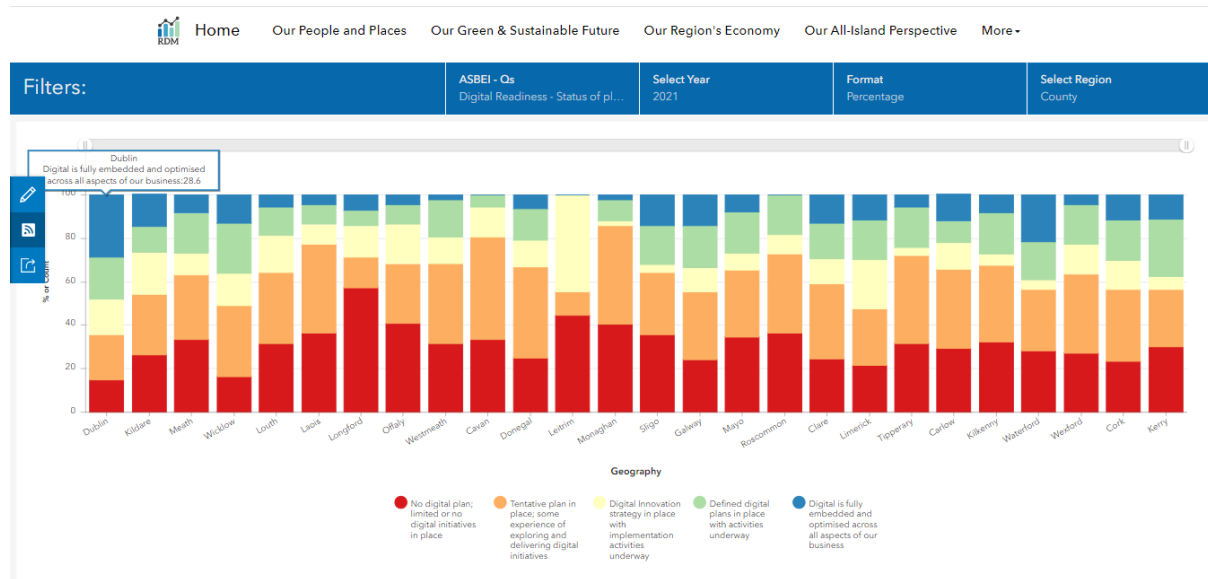
It is recognised by the European Commission's Smart Specialisation Strategy Community of Practice that to develop a good monitoring system which provides a clear picture of policy implementation, it is necessary to involve stakeholders to get their views on the evolution of priority areas. It also recognises open data platforms offer the potential to revolutionise Smart Specialisation Strategy monitoring.

In December 2023, following engagement with the Smart Specialisation Strategy National Implementation Group, the Regional Assemblies agreed to extend the scope of the RDM with the addition of a new Smart Specialisation dashboard. During 2023, DETE worked with the three Regional Assemblies and the All-Island Research Observatory (AIRO) to incorporate the 11 agreed Smart Specialisation Strategy impact indicators into the RDM data visualisation platform.

The RDM is a collaborative project between the three Regional Assemblies, the All-Island Research Observatory (AIRO) at Maynooth University and spatial infrastructure partners the Ordnance Survey Ireland (OSI) via the GeoHive platform.

The RDM visualisation platform accesses and presents administrative and other data in an interactive visual format which offers a more accessible way to investigate and monitor changing patterns in regional development performance across a range of indicators. The indicators contained in the existing monitor have been informed by a range of development bodies who are seeking a robust evidence base for policy and monitoring the impact of policy interventions. It is anticipated that the newly developed RDM Smart Specialisation 'dashboard' will be launched in Q4 2024 alongside this Progress Report.

Figure 2 Regional Development Monitor Sample

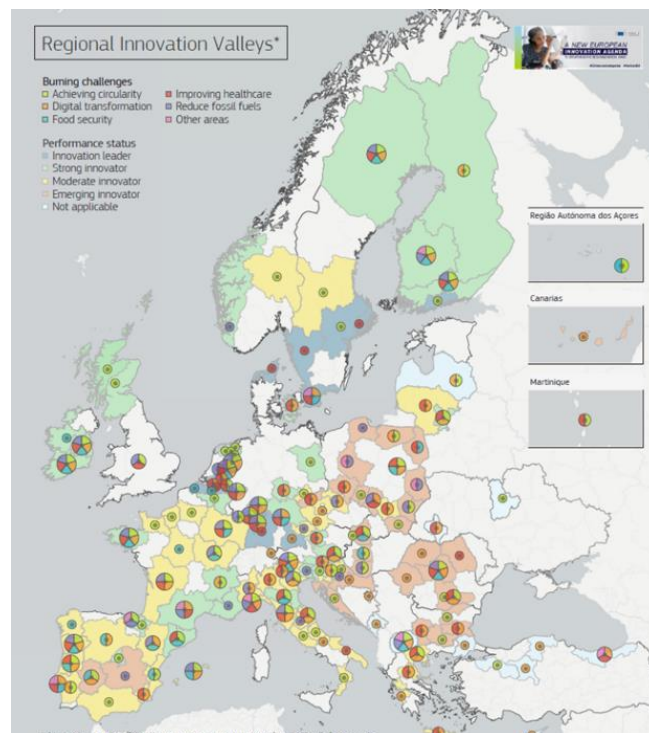


RIV status for Ireland's three NUTS 2 regions

The European Commission's RIVs initiative is one of 25 actions of the New European Innovation Agenda (NEIA). It aims to harness the full innovation potential across Europe, connecting less and more innovative regions and addressing social challenges through cutting edge technology.

Designated regions identify their competitive advantages to bridge the innovation divide by building on strategic areas of regional strength and specialisation, as defined in their Smart Specialisation strategies, in support of five identified challenges, namely, food security, renewable energy, circular economy, digital transition, and healthcare. In June 2024, all three of Ireland's NUTS 2 regions were designated as RIVs following an Expression of Interest process, making them part of a network of 149 similarly designated regions across Europe.

Figure 3 Regional Innovation Valleys network



The creation of the new RIV network seeks to mobilise:

- New regional partners – to complement European innovation investments including Horizon Europe European Innovation Ecosystems (EIE) and Interregional Innovation Investments (I3) instruments;
- Innovators – to bring their ideas to the market, enabling the link with the private sector and other R&I actors;
- Innovation ecosystems actors across EU territories – to participate in novel approaches and technology to the EU twin green and digital transitions; and
- European counterparts in existing innovation clusters – to establish connections with and help develop new clusters.

A key component of the RIV initiative is its matchmaking process, which plays a vital role in connecting various stakeholders within each region’s innovation ecosystem.

Further information on RIVs is available at: [Flagship 3: Accelerating and strengthening innovation in European Innovation Ecosystems across the EU and addressing the innovation divide - European Commission \(europa.eu\)](https://ec.europa.eu/eip/eip-rii/)

The RIV initiative is reflected in national enterprise policy and its progress will be tracked under the Enterprise Policy White Paper implementation – “activating international collaborative opportunities on regional enterprise innovation through EU initiatives such as Regional Innovation Valleys.”

The Smart Specialisation Strategy National Implementation Group and the Regional Assemblies will also be encouraging Irish regional participation in competitive calls for international collaborative projects in research and innovation, arising from this process.

Interregional Innovation Investments (I3) instrument

The European Commission funded Interregional Innovation Investments (I3) Instrument encourages the development of joint projects in shared Smart Specialisation priority areas. I3 funds interregional innovation investments projects focused on the twin Green and Digital transitions and in Smart Manufacturing. The overall objective of the programme is to promote innovation, innovation diffusion, and the reinforcement of EU and regional value chains, by linking regional ecosystems in shared Smart Specialisation areas vital to accelerate market uptake of research results and stimulate innovation.

Box 5 Interregional Innovation Investment (I3) project “I3 4 SEAWEED”

Comprising 16 partner entities from six EU countries, the I3-4-SEAWEED champions interregional collaboration aimed at scaling, demonstrating, and ensuring market readiness of business ventures within the macroalgae/seaweed sector.

Ireland has two participants in the consortium: F6S, the cascade funding managers for the project; Irish Seaweed Consultancy, based in Cashel, County Galway, a SME which specialises in science-based products and services designed for the seaweed industry and wider community in Aquaculture, Research and Development and Education and Outreach, and Wild Resource Management. It will receive an EU contribution of €296,346.

Combining the strengths of innovative SMEs, universities, tech hubs, and industry clusters, the project envisions a transformative, transnational value chain rooted in new sustainable seaweed cultivation techniques and algal biotechnological applications. The project's investment cases span the food industry, biofertilizers, and cosmetics.

To deliver on these investment cases, I3-4-SEAWEED will provide capacity-building, demonstrations, technical support, business matchmaking and support to the development of go-to-market market strategies tailored to the needs of each business case promoter.

The consortium will establish the basis of a transnational Seaweed Food Innovation Network Centre, envisioned as a permanent innovation and financial advisory hub for SMEs and regions engaged in interregional cooperation within the seaweed value chain. Ultimately, this project seeks to amplify interregional competitiveness by bridging the innovation gap across regions, committed to fully harness the potential of seaweed in Europe.

Financed from the ERDF, I3 supports interregional innovation projects in their commercialisation and scale-up phases, giving them the tools to overcome regulatory and other barriers to bring their projects to investment level. The total number of funded projects under I3 now stands at 44 out of a total 131 applications. Projects involving Irish entities include ‘Baltic MUPPETS’, ‘INNO4CFIs’, ‘DigiONE I3’ [Trinity St James’s Cancer Institute] and ‘I3 4 SEAWEED’ (see Box 5).

Supporting international RD&I engagement through Horizon Europe

Horizon Europe is an important source of investment in research and innovation for the Irish enterprise sector, for both indigenous SMEs and multinationals. The Framework Programme also plays a critical role in boosting research capabilities and outcomes in Ireland’s third level academic sector. It stimulates research activity and innovation which feeds the pipeline of ideas and talent on which the Irish enterprise sector relies for its growth, development, and renewal through commercialisation and start-up potential. At a Horizon Europe programmatic level, Ireland is performing particularly well under Pillar 1: Research Excellence, and also under the EIC. Pillar 2 clusters on Digital, Industry, Climate, Food and Health are also generating a significant level of Irish

engagement and investment in Irish-based collaborative research. To date, Irish SMEs account for 28.5% of Ireland's participations in Horizon Europe, totalling €199 million in investment from the programme.

EI also provides supports to ensure that Irish enterprises and researchers can best compete in Horizon Calls. These ensure that Ireland is well placed to deliver funding and projects under Horizon Europe. To date, the results of these efforts have been very strong.

Ireland's engagement with Horizon Europe is led by DFHERIS and is strongly supported by a network of National Contact Points (NCPs), facilitated and overseen by EI. DECC also supports Ireland's participation in two Horizon Europe Missions related to the twin green and digital transitions; Climate-Neutral and Smart Cities, and Adaptation to Climate Change.

Other regional projects promoting inter-regional collaborations across EU Member States

ORIGINN is an Interreg Europe co-funded project under the ERDF's PO1 which aims to support economic and social transformation in rural areas through industrial innovation with a particular focus on the AgriFood sector. The partnership comprises seven regional and local actors from Ireland, Spain, Sweden, Romania, Slovakia, Italy and Estonia. Irish participation in the project is administered by EMRA as the Irish partner.

Through active participation in ORIGINN, EMRA seeks the transfer of good practices from its ORIGINN partners and their stakeholders to counter rural depopulation through entrepreneurial and innovative activity in the AgriFood sector. The project assists in transferring good practice to reinforce the growth of the sector through collaboration, innovation and clustering to support scalable, sustainable and profitable food businesses. The four thematic semesters of the project focus on digitalisation; the green economy; social innovation; and commercial innovation.

In the SR, the TALENT4S3 Project – Retention and Attraction of Talent for a Better Deployment of Smart Specialisation Strategies (Smarter Europe) – is an Interreg Europe-funded initiative aimed at improving talent attraction and retention policies in the SR. Its goal is to ensure the necessary talent for the effective development of Smart Specialisation Strategies, particularly those addressing the brain drain issue by focusing on the competitive advantages of specific territories, along with encouraging the adoption of effective strategies in co-designing policy instruments responsive to local demands and conditions.

The National Smart Specialisation Implementation Group will continue to promote regional engagement with international RD&I initiatives, including further leveraging established connections with international organisations and partnerships (see Appendix 3 for a list of international RD&I organisations with Irish involvement).

Appendix 1

Smart Specialisation Strategy National Implementation Group

Table of Meetings

First Meeting – 15 December 2022
Second Meeting – 30 June 2023
Third Meeting – 17 January 2024
Fourth Meeting – 1 July 2024

List of Membership of National Implementation Group

Department of Enterprise, Trade and Employment (Secretariat)
Department of Public Expenditure, NDP Delivery and Reform
Department of Further and Higher Education, Research, Innovation and Science
Department of the Environment, Climate and Communications
Eastern and Midland Regional Assembly
Southern Regional Assembly
Northern and Western Regional Assembly
Enterprise Ireland
Research Ireland [previously Science Foundation Ireland]
IDA Ireland

Appendix 2

Smart Specialisation metrics (included in the Regional Development Monitor data visualisation platform)

The National Implementation Group identified 11 metrics to monitor the impact of Smart Specialisation in a regional context

	METRIC DESCRIPTION	RATIONALE	RELATED PRIORITY	SOURCE
1	Change in real labour productivity per hour worked, 2010–2019	Labour productivity indicators analyse the use of labour in the production process. Productivity is an important expected outcome of investment in innovation. Positive change in real labour productivity indicates improvement in this measure.	Improving national/regional enterprise R&I system [Strategic Goals 3, 4, 6, 7]	Eurostat
2	International Comparison of R&D Personnel per Thousand Total Employment, 2019	Target in Impact 2030: Ireland's National Research and Innovation Strategy, to increase this from 9.52 per 1,000 in the labour force to 15 per 1,000. International comparison allows comparison of progress against competitor countries and measure of research capability.	International collaboration on RD&I [Strategic Goals 6, 8]	Research and Development Budget: 2020 to 2021
3	Digital Readiness	Measure allows assessment of how ready enterprises feel they are with regard to established and emerging digital technologies.	Digitalisation and digital transformation [Strategic Goals 3, 5, 7]	DETE - Annual Business Survey of Economic Impact (ABSEI)
4	Climate Action Plan/Sustainability	Assesses how many companies have a climate action plan in place to prepare for green transition and improve sustainability.	Green transformation for enterprise [Strategic Goals 3, 5, 7]	DETE - Annual Business Survey of Economic Impact (ABSEI)
5	Established working relationship with HEI	Established links enable innovation diffusion and the creation of new and innovative products.	Innovation diffusion [Strategic Goals 3, 4]	DETE - Annual Business Survey of Economic Impact (ABSEI)
6	Horizon Europe Drawdown	Engagement with Horizon Europe is a key metric for Ireland's broader innovation goals.	International collaboration on RD&I [Strategic Goals 3, 4, 8]	Horizon Dashboard
7	Public-private co-publications	Important indicator of extensive collaboration between researchers and the private sector.	Improving national/regional enterprise R&I system [Strategic Goals 3, 4, 8]	Regional Innovation Scoreboard

	METRIC DESCRIPTION	RATIONALE	RELATED PRIORITY	SOURCE
8	International Scientific co-publications	Important measure of research capability and excellence.	Improving national/regional enterprise R&I system [Strategic Goals 3, 4, 8]	Regional Innovation Scoreboard
9	Trademark Applications	Indicator of product innovation in the wider economy.	Improving national/regional enterprise R&I system [Strategic Goals 3, 4, 8]	Regional Innovation Scoreboard
10	RIS 2021 NUTS regional comparison with EU Average	Measure the full innovative capability of a region	Improving national/regional enterprise R&I system [Strategic Goals 3, 4, 5, 7, 8]	Regional Innovation Scoreboard
11	Number of patents generated	Indicator for effectiveness of regional innovation ecosystems.	Improving national/regional enterprise R&I system [Strategic Goals 3, 4, 7]	Regional Innovation Scoreboard

Appendix 3

List of International RD&I Organisations with Irish involvement

Low Frequency Array (LOFAR)	This is an international radio telescope with stations across Europe. Ireland's station was installed at Birr Castle, Co. Offaly in 2017. The Irish LOFAR consortium (I-LOFAR) includes researchers based in Dublin, Galway, Cork and the Midlands. I-LOFAR provides enterprise opportunity in the Midlands, particularly for industries working with big data, reflected in the Midlands Regional Enterprise Plan to 2024 under Strategic Objective 2.2. Birr Technology Centre works with I-LOFAR researchers to run training courses, specialised consultancy, and industry events.
European Council for Nuclear Research (CERN)	In November 2023, Government approval was received for Ireland to apply for associate membership of CERN, the largest particle physics laboratory in the world. The CERN Taskforce visited Ireland in April 2024 to assess the application and met with nearly every higher education institution across the country, as well as SMEs from Connaught and Munster. DFHERIS has coordinated a visit to CERN with representatives from every Irish university and is engaging with industry and technological universities on CERN participation.
European Space Agency (ESA)	ESA is an international organisation established to "provide for and to promote, for exclusively peaceful purposes, cooperation among European States in space research and technology and their space applications, with a view to their being used for scientific purposes and for operational space applications systems." The primary purpose of Ireland's membership of ESA is to nurture and build a base of innovative Irish companies to develop space technologies for commercial exploitation on the global space and related markets.
Strategic Energy Technology Plan Implementation Groups	DECC is engaged with the European Commission's Strategic Energy Technology Plan Implementation Groups, which inform alignment of the National Energy RD&I Funding Programme, operated by the SEAI, with European priorities.
Clean Energy Transition Partnership	The Clean Energy Transition Partnership aims to empower the clean energy transition and contribute to the EU's goal of becoming the first climate-neutral continent by 2050, by pooling national and regional RDTI funding for a broad variety of technologies and system solutions required to make the transition.
International Energy Agency (IEA)	SEAI represents Ireland on the Committee of Energy Research and Technology of the IEA which oversees the activity of five working parties, who in turn oversee the activities of Technology Collaboration Programmes (TCPs). Ireland is involved in 11 TCPs. Ireland has also joined the IEA's Expert Group on Research and Development which consider R&D priority setting and evaluation.
North Seas Energy Co-Operation (NSEC)	As part of its membership of NSEC, Ireland is committed to regular exchanges with key actors including in the area of research & innovation, to reap the full renewable energy potential of the North Seas to the benefit of Europe as a whole.
European Cybersecurity Industrial, Technology and Research Competence Centre	DECC, via the National Cyber Security Centre, is the National Coordination Centre for Ireland under the European Cybersecurity Industrial, Technology and Research Competence Centre and the Network of National Coordination Centres Regulation.
Integrated Carbon Observation System (ICOS)	The EPA has supported Ireland's membership of ICOS-European Research Infrastructure Consortium (ERIC) as the National Focal Point since Ireland became a full member in January 2023.
Joint Programming Initiative "Connecting Climate Knowledge for Europe" (JPI Climate)	The EPA is one of Ireland's key member organisations in JPI Climate, a pan-European intergovernmental initiative which brings together European countries to jointly coordinate climate research and fund new transnational research initiatives that provide useful climate knowledge and services for post-COP21 Climate Action.

Appendix 4

ERDF fulfilment criteria as approved by European Commission

To receive moneys under ERDF member states must show that they meet the enabling conditions for funding. Having in place a Smart Specialisation Strategy is an enabling condition for Policy Objective 1 'A Smarter Europe'.

With regard to this, the European Commission, in drafting the Common Provision Regulations (CPR) for the management of cohesion funds in 2021-2027, clearly set out fulfilment criteria for national smart specialisation strategies. These are then self-assessed and then approved by the Commission. Ireland's strategy was approved on 22 August 2022. The Fulfilment Criteria for the strategy to be assessed, as per Article 15 (1) of the CPR, Annex IV, are set out below:

Fulfilment Criteria for Smart Specialisation
1. Up-to-date analysis of challenges for innovation diffusion and digitalisation.
2. Existence of competent regional or national institution or body, responsible for the management of the smart specialisation strategy.
3. Monitoring and evaluation tools to measure performance towards the objective of the strategy.
4. Functioning of stakeholder co-operation ("entrepreneurial discovery process").
5. Actions necessary to improve national or regional research and innovation system, where relevant.
6. Where relevant, actions to support industrial transition.
7. Measures for enhancing cooperation with partners outside a given Member State in priority areas supported by the smart specialisation strategy.



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